

KENWOOD

DVD-RECEIVER

KDV-MP7339

KDV-MP7439

INSTRUCTION MANUAL

Kenwood Corporation



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(DVD/VCD/DivX/MPEG1/MPEG2/JPEG)			

Before use

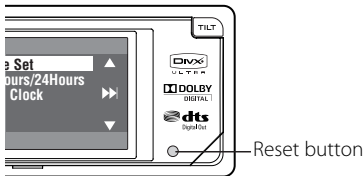
⚠ WARNING

To prevent injury or fire, take the following precautions:

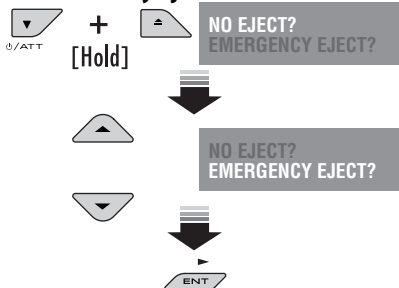
- To prevent a short circuit, never put or leave any metallic objects (such as coins or metal tools) inside the unit.
- Do not watch or fix your eyes on the unit's display when you are driving for any extended period.
- DO NOT operate the unit while driving. If you need to operate the unit while driving, be sure to look around carefully.

How to reset your unit

- If the unit fails to operate properly, press the Reset button. The unit returns to factory settings when the Reset button is pressed.



How to forcibly eject a disc



Cautions on the monitor

- The monitor built in this unit has been produced with high precision, but it may have some ineffective dots. This is inevitable and is not malfunction.
- Do not expose the monitor to direct sunlight.
- When the temperature is very cold or very hot.
 - Chemical changes occur inside, causing malfunction.
 - Pictures may not appear clearly or may move slowly. Pictures may not be synchronized with the sound or picture quality may decline in such environments.

Cleaning the Unit

If the faceplate of this unit is stained, wipe it with a dry soft cloth such as a silicon cloth.

If the faceplate is stained badly, wipe the stain off with a cloth moistened with neutral cleaner, then wipe it again with a clean soft dry cloth.



- Applying spray cleaner directly to the unit may affect its mechanical parts. Wiping the faceplate with a hard cloth or using a volatile liquid such as thinner or alcohol may scratch the surface or erase characters.

Cleaning the Faceplate Terminals

If the terminals on the unit or faceplate get dirty, wipe them with a clean soft dry cloth.

Lens Fogging

When you turn on the car heater in cold weather, dew or condensation may form on the lens in the disc player of the unit. Called lens fogging, this condensation on the lens may not allow discs to play. In such a situation, remove the disc and wait for the condensation to evaporate. If the unit still does not operate normally after a while, consult your Kenwood dealer.

Notes

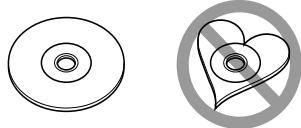
- If you experience problems during installation, consult your Kenwood dealer.
- When you purchase optional accessories, check with your Kenwood dealer to make sure that they work with your model and in your area.
- The illustrations of the display and the panel appearing in this manual are examples used to explain more clearly how the controls are used. Therefore, what appears on the display in the illustrations may differ from what appears on the display on the actual equipment, and some of the illustrations on the display may be inapplicable.
- If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.




Handling discs

- Do not touch the recording surface of the disc.
- Do not stick tape etc. on the disc, or use a disc with tape stuck on it.
- Do not use disc type accessories.
- Clean from the center of the disc and move outward.
- When removing discs from this unit, pull them out horizontally.
- If the disc center hole or outside rim has burrs, use the disc only after removing the burrs with a ballpoint pen etc.

Discs that cannot be used

- Discs that are not round cannot be used.



- Discs with coloring on the recording surface or discs that are dirty cannot be used.
- This unit can only play the CDs with   . This unit may not correctly play discs which do not have the mark.
- You cannot play a CD-R or CD-RW that has not been finalized. (For the finalization process refer to your CD-R/CD-RW writing software, and your CD-R/CD-RW recorder instruction manual.)

About DivX

DivX is a popular media technology created by DivX, Inc. DivX media Files contain highly compressed video with high visual quality that maintains a relatively small file size. DivX files can also include advanced media features like menus, subtitles, and alternate audio tracks. Many DivX media files are available for download online, and you can create your own using your personal content and easy-to-use tools from DivX.com.

About DivX Certified

DivX Certified products are officially tested by the creators of DivX and guaranteed to play all versions of DivX video, including DivX 6. Certified products qualify for one of several DivX Profiles that designate the type of video the product supports, from compact portable video to high-definition video.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Manufactured under license under U.S. Patent #: 5,451,942 & other U.S. and worldwide patents issued & pending. DTS and DTS Digital Out are registered trademarks and the DTS logos and Symbol are trademarks of DTS, Inc. © 1996-2007 DTS, Inc. All Rights Reserved.

DVD is a trademark of DVD Format/Logo Licensing Corporation registered in the U.S., Japan and other countries.

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

DivX, DivX Ultra Certified, and associated logos are trademarks of DivX, inc. and are used under license.

Official DivX® Ultra Certified product

Plays all versions of DivX® video (including DivX® 6) with enhanced playback of DivX® media files and the DivX® Media Format

Microsoft and Windows Media are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

**The marking of products using lasers
(Except for some areas)**



The label is attached to the chassis/case and says that the component uses laser beams that have been classified as Class 1. It means that the unit is utilizing laser beams that are of a weaker class. There is no danger of hazardous radiation outside the unit.

Playable disc type

Disc type	Recording format, file type, etc.	Playable
DVD	DVD Video (Region Code KDV-MP7339: 3, KDV-MP7439: 4)* ¹	✓OK
	DVD Audio	✗NO
	DVD-ROM	✗NO
DVD Recordable/Rewritable (DVD-R*²/-RW, +R/+RW*³) <ul style="list-style-type: none"> Compliant to UDF bridge format DVD-RAM cannot be played. 	DVD Video	✓OK
	DivX/MPEG1/MPEG2	
	JPEG	
	MP3/WMA/WAV	
	MPEG4	✗NO
	DVD-VR, +VR	
Dual Disc	DVD side	✓OK
	Non-DVD side	✗NO
CD/VCD	Audio CD/CD Text (CD-DA)	✓OK
	VCD (Video CD)	
	DTS-CD* ⁴	
	CD-ROM	✗NO
	CD-I (CD-I Ready)	
CD Recordable/Rewritable (CD-R/-RW) <ul style="list-style-type: none"> Compliant to ISO 9660 level 1, level 2, Romeo, Joliet 	CD-DA	✓OK
	MP3/WMA/WAV	
	JPEG	
	DivX/MPEG1/MPEG2	
	MPEG4	✗NO

*¹ If you insert a DVD Video disc of an incorrect Region Code, "Region code error" appears on the monitor.

*² DVD-R recorded in multi-border format is also playable (except for dual layer discs).

*³ It is possible to play back finalized +R/+RW (Video format only) discs. However, the use of +R double layer disc is not recommended.

*⁴ To reproduce DTS sound, use the digital connection. (🔗 Installation/Connection Manual)

- "DVD Logo" is a trademark of DVD Format/Logo Licensing Corporation registered in the US, Japan and other countries.

Caution for DualDisc playback

The Non-DVD side of a "DualDisc" does not comply with the "Compact Disc Digital Audio" standard. Therefore, the use of Non-DVD side of a DualDisc on this product may not be recommended.

Notes on reproduced sound (🔗 page 38)

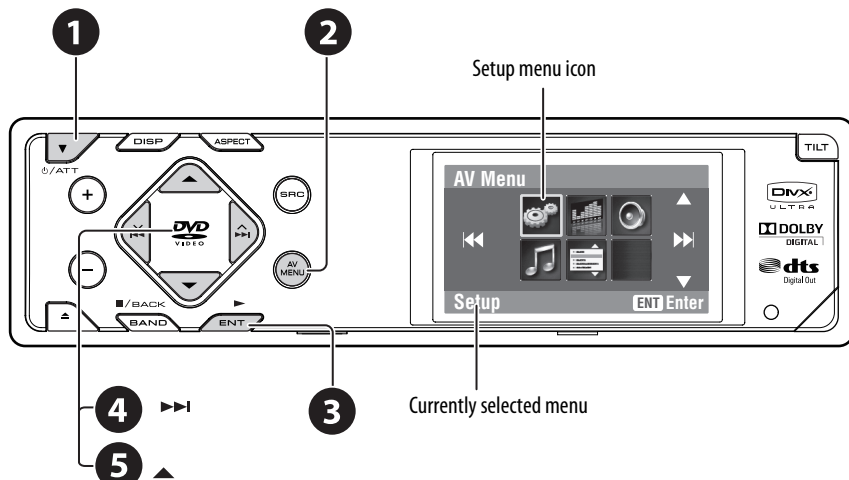
Through the analog terminals (Speaker out/LINE OUT) of this unit...

- Multi-channel signals are downmixed.
- DTS sound cannot be reproduced.

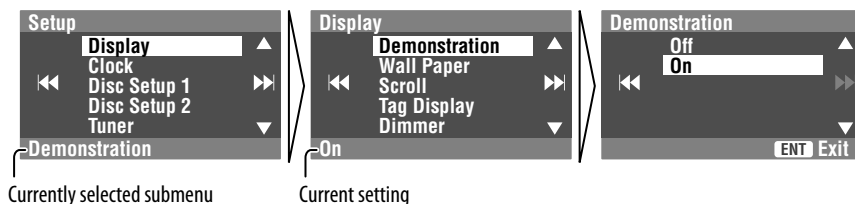
Before operating the unit

Cancel the display demonstration and set the clock. (☞ also pages 28 and 29)

Indication language: In this manual, English indications are used for purpose of explanation. You can select the indication language on the monitor. (☞ page 29)

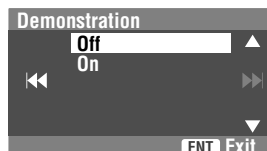


- 1 Turn on the power.
- 2 Display <AV Menu>.
- 3 Enter the <Setup> menu.
- 4 Select <Display> ⇌ <Demonstration>, then activate the <Demonstration> screen.

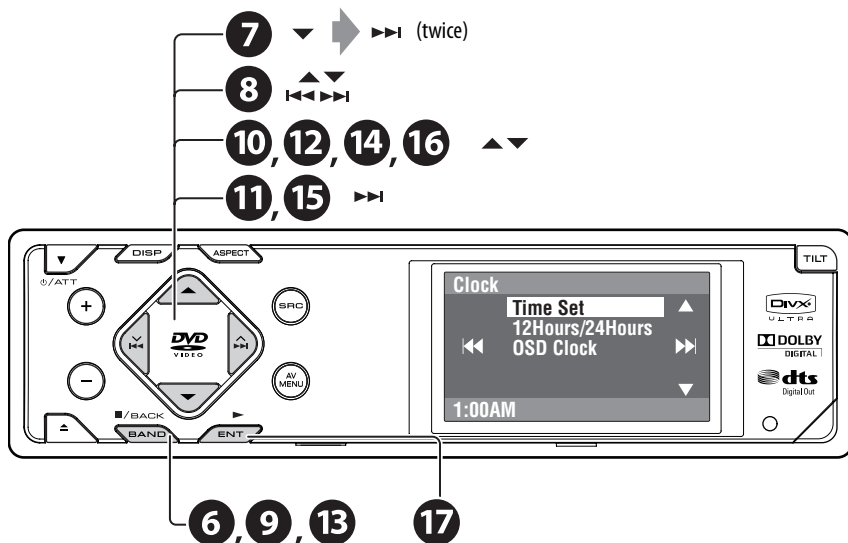


- 5 Cancel the display demonstrations.

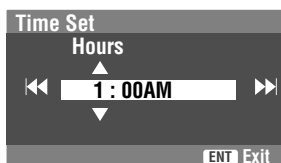
Select <Off>.



Continued on the next page

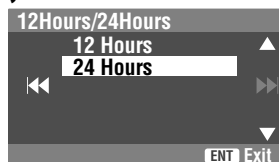


- 6 Return to the <Setup> menu.
- 7 Select <Clock> ⇒ <Time Set>, then activate the <Time Set> screen.
- 8 Set the clock time.



- 9 Return to the <Clock> menu.
- 10 Select <12Hours/24Hours>.
- 11 Activate the <12Hours/24Hours> screen.

- 12 Select either the 12-hour or 24-hour system.



- 13 Return to the <Clock> menu.
- 14 Select <OSD Clock>.
- 15 Activate the <OSD Clock> screen.
- 16 Select the <OSD Clock> setting.
 - **Off:** The clock time is not displayed while playing back a video source.
 - **On:** The clock time is displayed while playing back a video source.
- 17 Finish the procedure.

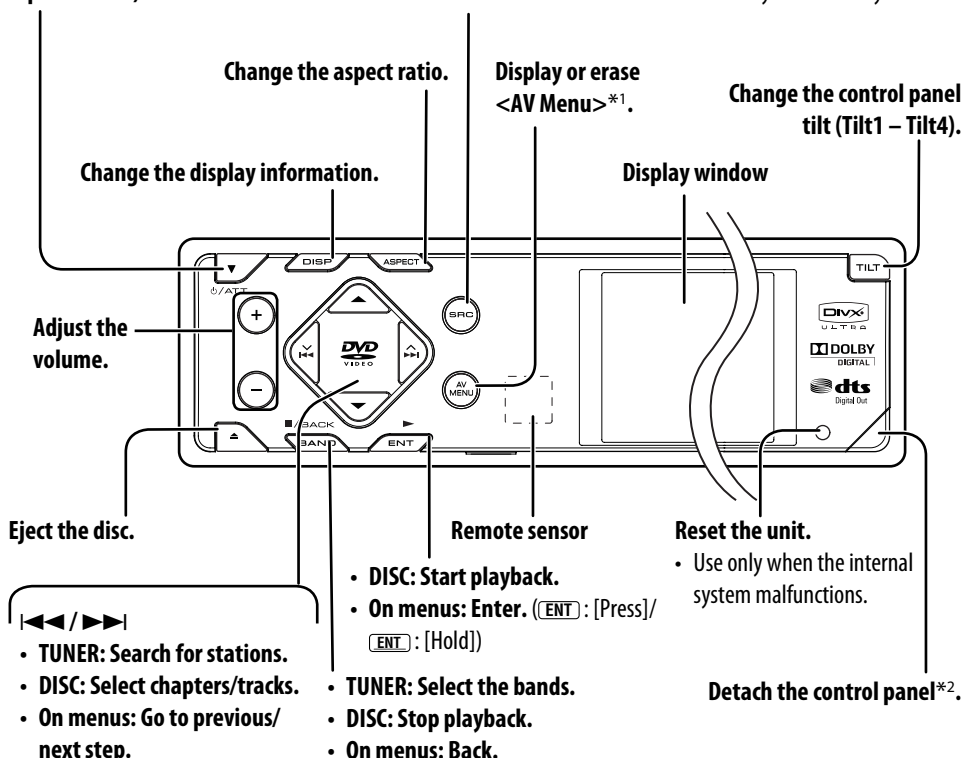
Basic operations — Control panel

- Turn on the power.
- Turn off the power [Hold].
- Attenuate the sound (if the power is on).

Select the source.

TUNER → DISC (DVD/VCD/CD) → AV-IN →
(back to the beginning)

- You cannot select these sources if they are not ready.



*1 <AV Menu> screens

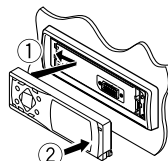
You can use the menus to set up various settings.

The <AV Menu> screen consists of the following sub-menus—

Setup/Equalizer/Sound/Mode/List.

- For details, see page 27.

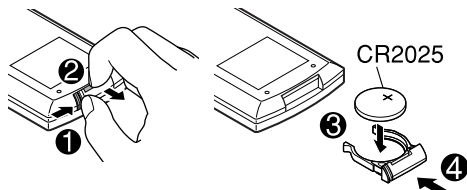
*2 To attach the control panel



*3 By holding ▲ / ▼, you can display the list accessible for the selected source.

Basic operations — Remote controller

Installing the lithium coin battery (CR2025)



If the range of effectiveness of the remote controller decreases, replace the battery.

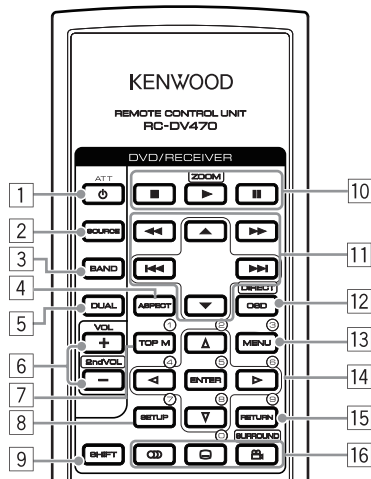
Before using the remote controller:

- Aim the remote controller directly at the remote sensor on the unit.
- DO NOT expose the remote sensor to bright light (direct sunlight or artificial lighting).

Warning: To prevent accidents and damage

- Do not install any battery other than CR2025 or its equivalent.
- Store the battery in a place where children cannot reach.
- Do not recharge, short, disassemble, or heat the battery or dispose of it in a fire.
- Do not leave the battery with other metallic materials.
- Do not poke the battery with tweezers or similar tools.
- Wrap the battery with tape and insulate when throwing away or saving it.

Main elements and features



- 1 • Turns on the power.
- Attenuates the sound if the power is on.
- Turns off the power if pressed and held (while the power is on).
- 2 Selects the source.
- 3 Selects the FM/AM bands.
- 4 Changes the aspect ratio of the playback pictures.
- 5 Not used for this unit.
- 6 Adjusts the volume level.
 - Not used as 2nd VOL button for this unit.
- 7*1 • DVD/DivX 6: Shows the disc menu.
- VCD: Resumes PBC playback (see page 21).
- 8*1 Not used as SETUP button for this unit.
- 9 SHIFT button

- 10 ■ (stop)*2, ► (play), || (pause)
- ► (play) also functions as ZOOM button when pressed with SHIFT button (☞ page 22).

11 **For advanced disc operations:**

- ▲ / ▼
DVD: Selects the titles.
Other discs except VCD/CD: Selects the folders.
- ◀◀ / ▶▶:
Press briefly: reverse skip/forward skip
Press and hold: reverse search/forward search
- ◀◀ / ▶▶: reverse search/forward search

For FM/AM operations:

- ▲ / ▼: Changes the preset stations.
- ◀◀ / ▶▶:
– Functions to search for stations.
Press briefly: Auto Search
Press and hold: Manual Search

- 12 Shows the on-screen bar.
- Also functions as DIRECT button when pressed with SHIFT button. (☞ pages 20 and 21)

- 13*1
- DVD/DivX 6: Shows the disc menu.
 - VCD: Resumes PBC playback. (☞ page 21)

- 14*1
- Makes selection/settings.
 - ◀▷: Skips back or forward by 5 minutes for DivX/MPEG1/MPEG2.

- 15*1 RETURN button

- 16
- DVD: Selects audio language (○○), subtitles (....), angle (📺)*2.
 - DivX: Selects audio language (○○), subtitles (....).
 - VCD: Selects audio channel (○○).

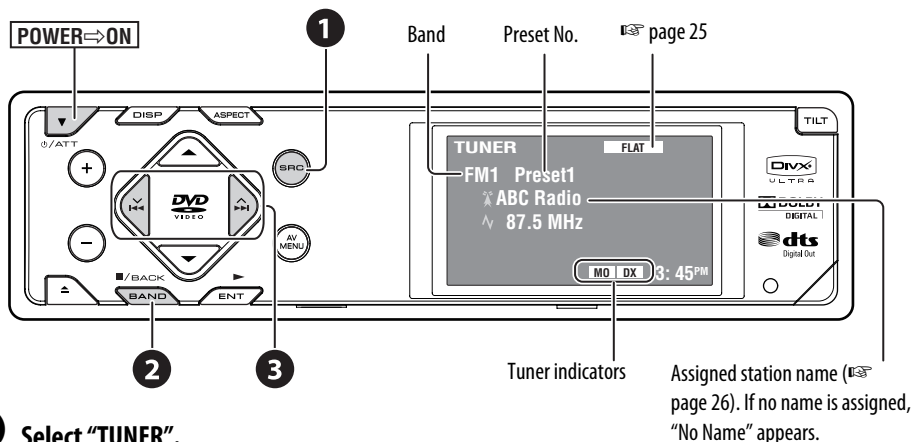
*1 Functions as number buttons when pressed with SHIFT button.

– TUNER: Selects preset station.

– DISC: Selects chapter/title/folder/track.

*2 Not used as SURROUND button for this unit.

Listening to the radio



- 1 Select "TUNER".
- 2 Select the bands.
→ FM1 → FM2 → FM3 → AM
- 3 Search for a station—Auto Search.

- Manual Search: Hold either ◀◀ or ▶▶ until "Manual Search" appears on the display, then press it repeatedly.
- The ST indicator lights up when receiving an FM stereo broadcast with sufficient signal strength.

When an FM stereo broadcast is hard to receive

- 1

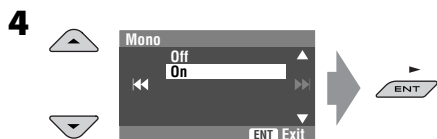
Setup ENT Enter
- 2

Mode ENT Enter

Mode menu icon
- 3

Mode

Mono
DX/Local
SSM
Title Entry
Off



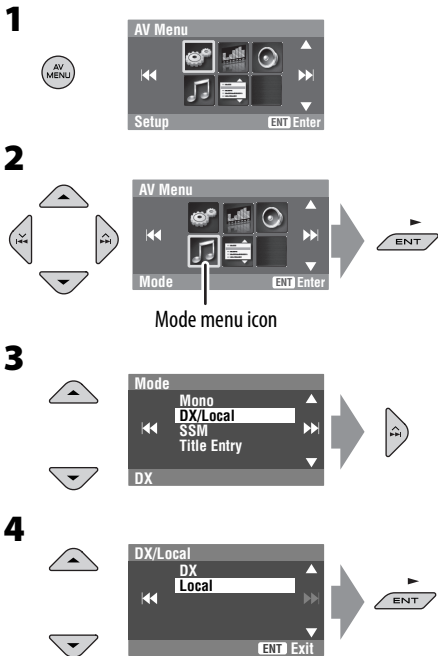
Reception improves, but stereo effect will be lost.

- The MO indicator lights up.

To restore stereo effect, select <Off> in step 4.

Tuning in to stations with sufficient signal strength

This function works only for FM bands.
Once you have activated this function (selected <Local>), it always works when searching for FM stations.

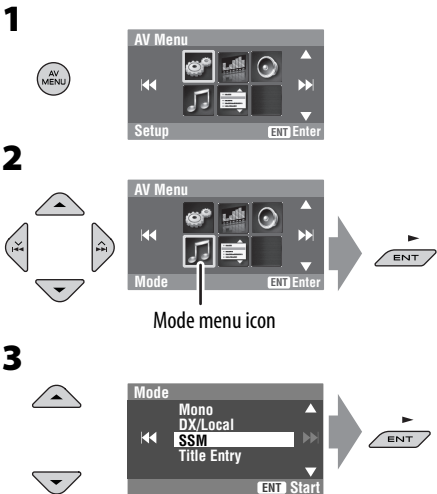


Only stations with sufficient signal strength will be detected.

- The DX indicator goes off, then the LO indicator lights up.

FM station automatic presetting —SSM (Strong-station Sequential Memory)

This function works only for FM bands.
You can preset six stations for each band.



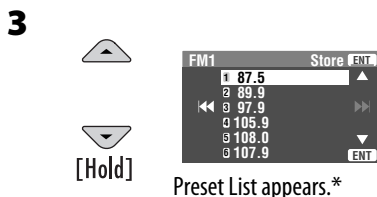
Local FM stations with the strongest signals are searched and stored automatically in the FM band.

Manual presetting

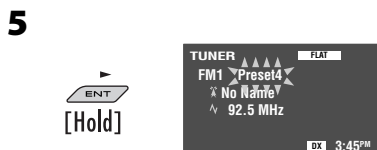
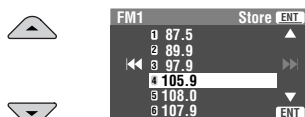
Ex.: Storing FM station of 92.5 MHz into preset number 4 of the FM1 band.



2 Tune in to a station you want to preset.



4 Select a preset number.

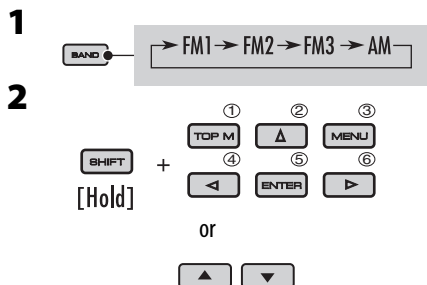


The station selected in step **2** is now stored in preset number 4.

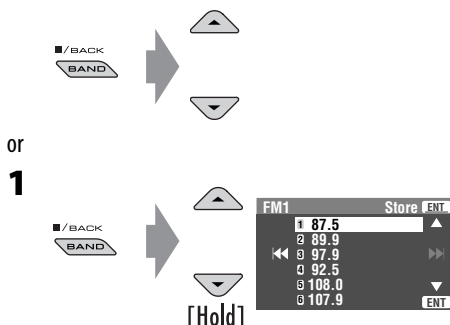
- * Each time you hold the button, you can change the FM bands.
- Preset List can also be accessed through <AV Menu> → <List>. (⏮ right)

Selecting preset stations

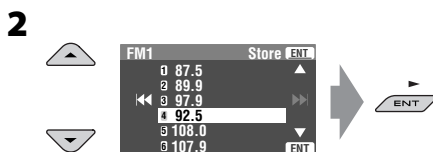
On the remote:



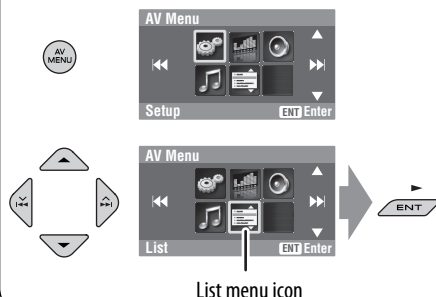
On the unit:



- Each time you hold the button, you can change the FM bands.



- Preset List can also be accessed through <AV Menu> → <List>.



Disc operations

The disc type is automatically detected, and playback starts automatically (for some discs: automatic start depends on its internal program).

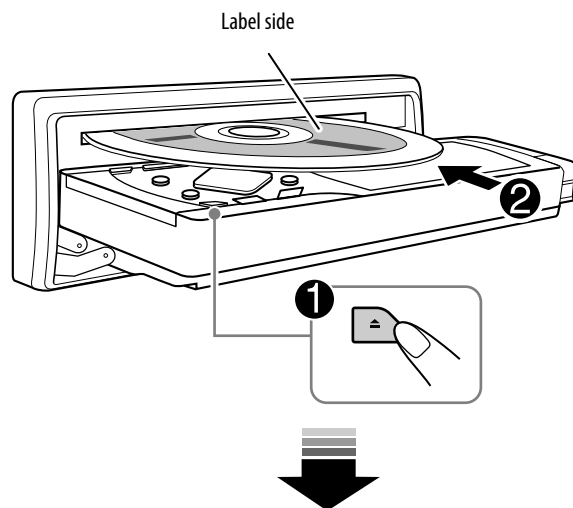
If a disc does not have any disc menu, all tracks in it will be played repeatedly until you change the source or eject the disc.

If “⊗” appears on the monitor, the unit cannot accept the operation you have tried to do.

- In some cases, without showing “⊗”, operations will not be accepted.

Insert the disc.

Playback starts automatically.



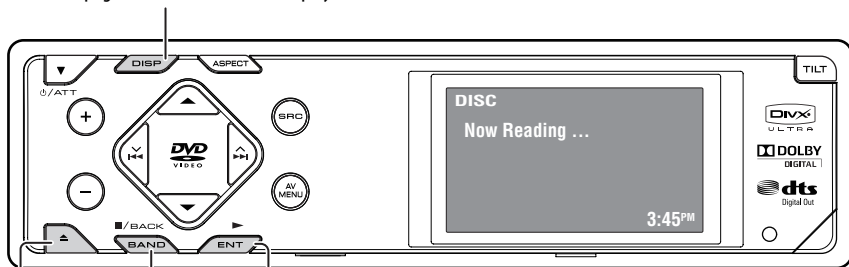
Caution:

Do not place your finger behind the control panel.

Caution on volume setting:

Discs produce very little noise compared with other sources. Lower the volume before playing a disc to avoid damaging the speakers by the sudden increase of the output level.

DISP: Press if no playback picture appears, but disc information (pages 16 and 17) screen is displayed.



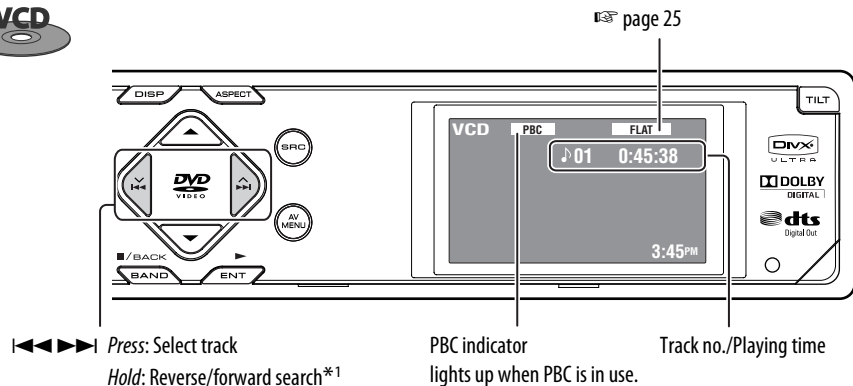
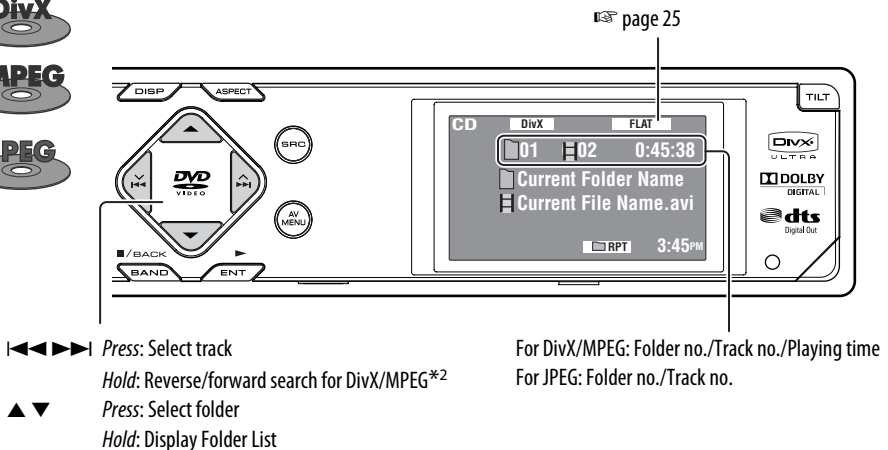
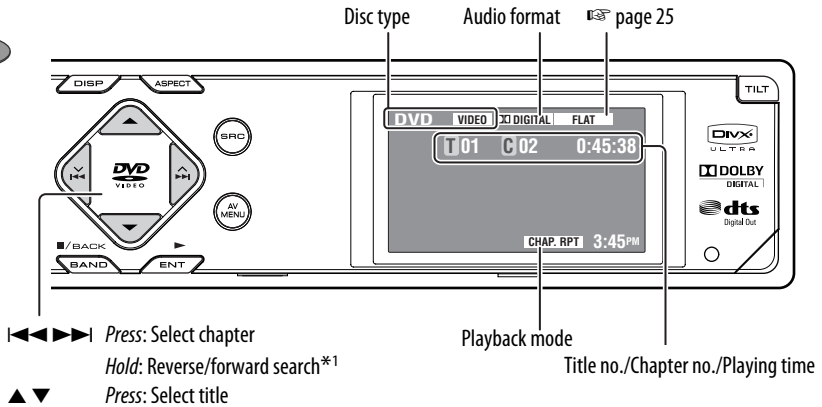
▲: Eject the disc.

■: Stop playback.

▶: Start playback if necessary.

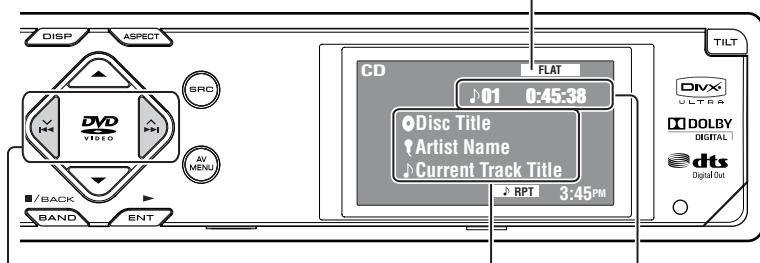
While playing the following discs, press **DISP**.

- Each time you press the button, playback picture and disc information screens appear alternately.
- For discs except DVD and VCD: The control screen appears on the connected external monitor. (page 37)





page 25



Press: Select track
Hold: Reverse/forward search*¹

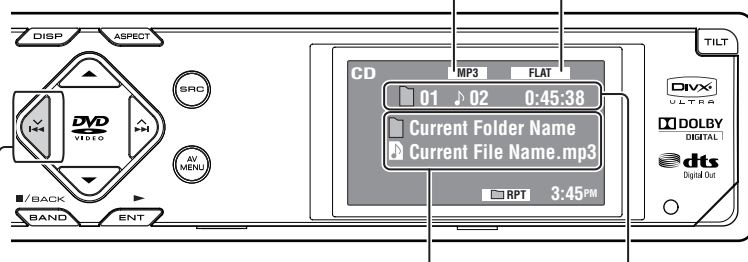
Disc title/Artist name/Track title
(only for CD Text)*³

Track no./Playing time



Audio format
(MP3/WMA/WAV)

page 25



Press: Select track
Hold: Reverse/forward search*¹

*⁴

Folder no./Track no./Playing time

Press: Select folder
Hold: Display Folder List

*¹ Search speed: x2 ⇌ x10.

*² Search speed: ►►1 ⇌ ►►2.

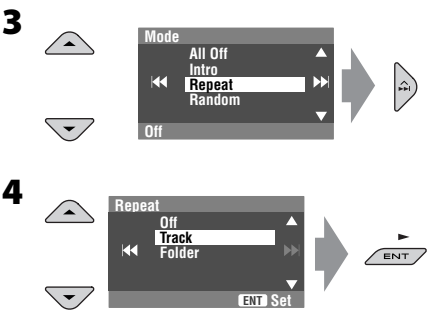
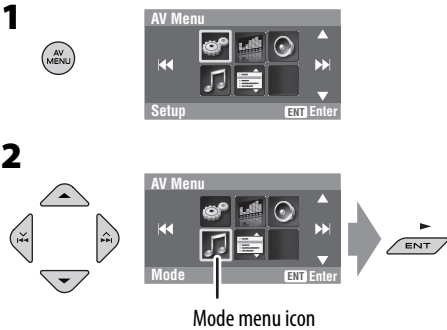
*³ "No Name" appears for conventional CDs.

*⁴ Tag data will be shown instead of folder/file names when they are recorded and <Tag Display> is set to <On>. (page 28)

Selecting playback modes

You can use only one of the following playback modes—Intro/Repeat/Random.

Ex. To select Track Repeat



When one of the playback modes is selected, the corresponding indicator lights up on the disc information screen.

To cancel, select <All Off> in step **3** or <Off> in step **4**.

Disc type	Intro	Repeat	Random
	—	Chapter: Repeats current chapter Title: Repeats current title	—
	Track: Plays the first 15 seconds of each track (for VCD: PBC not in use)	Track: Repeats current track (for VCD: PBC not in use)	Disc: Randomly plays all tracks (for VCD: PBC not in use)
	Track: Plays the first 15 seconds of each track Folder: Plays the first 15 seconds of the first track of each folder	Track: Repeats current track Folder: Repeats all tracks of the current folder	Folder: Randomly plays all tracks of current folder, then tracks of next folders Disc: Randomly plays all tracks
	—	Track: Repeats current track Folder: Repeats current folder	—
	—		—
	—	Folder: Repeats current folder	—

Selecting tracks on the list

If a disc includes folders, you can display the Folder/Track (File) Lists, then start playback.

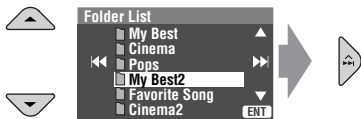
1



Folder List appears.

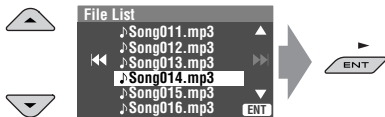
- Hold the button to see the next/previous folders.

2 Select a folder, then activate the Track List.

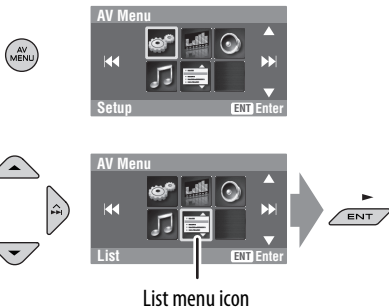


Track List of the selected folder appears.

3 Select a track, and start playing.

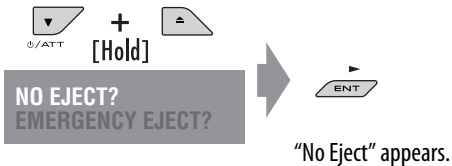


- Folder List can also be accessed through <AV Menu> → <List>.



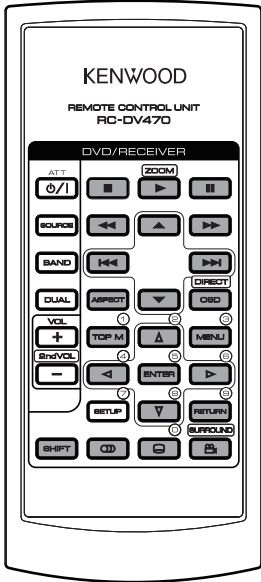
Prohibiting disc ejection

You can lock a disc in the loading slot.



To cancel the prohibition, repeat the same procedure to select “EJECT OK?”.

Operations using the remote controller



- [Stop] : Stop playback.
- [Pause] : Pause (Frame by frame playback if pressed during pause).
- [Play] : Start playback.
- [Fast Reverse] [Fast Forward] :

Reverse/forward search*1. (No sound can be heard.)
Slow motion*2 during pause. (No sound can be heard.)

- [First] [Last] :
- Press: Select chapter (within the same title, during play or pause).
- Hold: Reverse/forward search*3

- [Up] [Down] : Select title (during play or pause).
- [Aspect] : Select aspect ratio.
- [Sub] : Select subtitle language.
- [Audio] : Select audio language.
- [View] : Select view angle.

Using menu driven features...

- 1 [Top Menu] [Menu]
- 2 Select an item you want to start play.
[Up] [Down] [Left] [Right]
- 3 [Enter]

- [Direct] [Shift] + [OSD] → [Chapter Icon] → [Enter] :
Select chapter (during play or pause).
- Select title (when not playing).

- [Direct] [Shift] + [OSD] → [Title Icon] → [Enter] :
Select title (during play or pause).



- [Stop] : Stop playback.
- [Pause] : Pause (Frame by frame playback if pressed during pause).
- [Play] : Start playback.
- [Fast Reverse] [Fast Forward] : Reverse/forward search*4. (No sound can be heard.)
- [First] [Last] : Press: Select track.
- Hold: Reverse/forward search*5. (No sound can be heard.)

- [Up] [Down] : Select folder.
- [Aspect] : Select aspect ratio.
- [Sub] : Select subtitle language. (DivX only)
- [Audio] : Select audio language. (DivX only)

- [Direct] [Shift] + ([OSD] → [Chapter Icon] → [Enter] :
Select track (within the same folder).

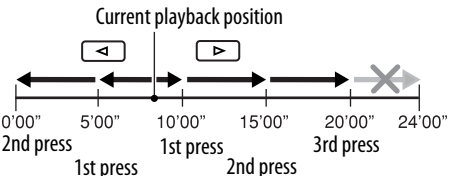


For DivX 6: Using menu driven features...

- 1 [Top Menu] [Menu]
- 2 Select an item you want to start play.
[Up] [Down] [Left] [Right]
- 3 [Enter]

While playing...

- [Fast Reverse] [Fast Forward] : Return/advance the scenes by 5 minutes.



- : Stop playback.
- : Shows the current file until you change it.
- : Start playback (Slide show: each file is shown for a few seconds.).
- : Select track.
- : Select folder.
- : Select aspect ratio.

+ (→ ...) → : Select track (within the same folder).

- : Stop playback.
- : Pause (Frame by frame playback if pressed during pause).
- : Start playback.
- :

Reverse/forward search*¹. (Forward slow motion*² during pause. No sound can be heard.)

- Reverse slow motion does not work.

- :

Press: Select track.

Hold: Reverse/forward search*³. (No sound can be heard.)

- : Select aspect ratio.

- : Select audio channel (ST: stereo, L: left, R: Right).

+ (→ ...) → : Select track.

During PBC playback...

+ (→ ...) → :

Select an item on the menu.

- To return to the previous menus, press .

To cancel PBC playback

- 1

- 2 + (→ ...) →

- To resume PBC, press / .

- : Stop playback.
- : Pause.
- : Start playback.
- : Reverse/forward search*¹.
- : Press: Select tracks.
- Hold: Reverse/forward search*³.
- : Select folder.

+ (→ ...) → : Select track (within the same folder).

- : Stop playback.
- : Pause.
- : Start playback.
- : Reverse/forward search*¹.
- : Press: Select track.

Hold: Reverse/forward search*³.

+ (→ ...) → : Select track.

*¹ Search speed: x2 ⇒ x5 ⇒ x10 ⇒ x20 ⇒ x60

*² Slow motion speed: 1/32 ⇒ 1/16 ⇒ 1/8 ⇒ 1/4 ⇒ 1/2

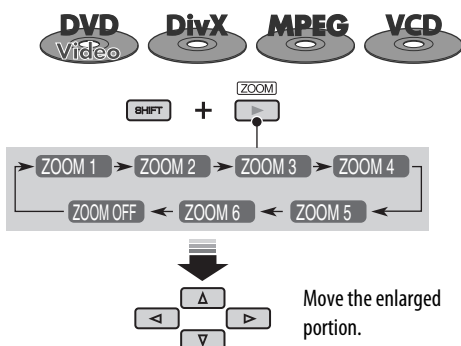
*³ Search speed: x2 ⇒ x10

*⁴ Search speed: ►►1 ⇒ ►►2 ⇒ ►►3

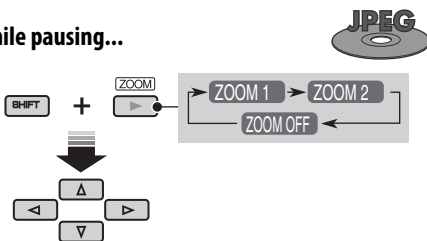
*⁵ Search speed: ►►1 ⇒ ►►2

Enlarging the view (Zoom in)

During moving picture playback...



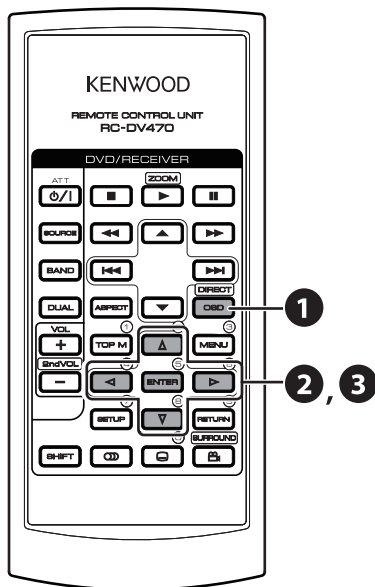
While pausing...



To cancel zoom, select "ZOOM OFF".

Operations using the on-screen bar (DVD/VCD/DivX/MPEG1/MPEG2/JPEG)

These operations are possible on the monitor using the remote controller.



1 Display the on-screen bar. (page 23)

OSD (twice)

2 Select an item.



3 Make a selection.

ENTER

If a pop-up menu appears...



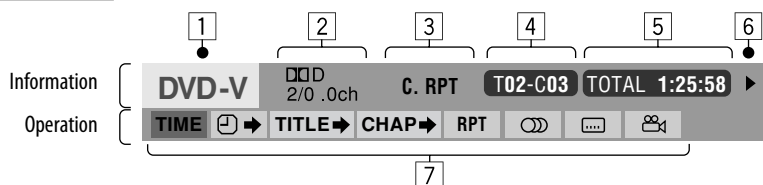
• For entering time/numbers...

< > : Move the entry position
 ▲ ▼ : Select a number

To remove the on-screen bar

OSD

On-screen bar



Above example is of DVD Video. Items shown on the bar vary due to the disc type.

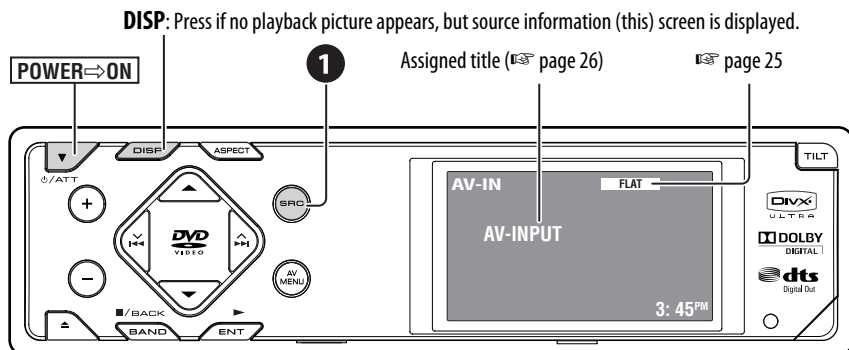
- | | |
|---|--|
| <p>1 Disc type</p> <p>2 • DVD: Audio signal format
• VCD: PBC</p> <p>3 Playback mode*</p> <p>DVD Video:</p> <p style="padding-left: 20px;">T. RPT: Title repeat
C. RPT: Chapter repeat</p> <p>DivX/MPEG:</p> <p style="padding-left: 20px;">T. RPT: Track repeat
F. RPT: Folder repeat</p> <p>JPEG:</p> <p style="padding-left: 20px;">F. RPT: Folder repeat</p> <p>VCD:</p> <p style="padding-left: 20px;">T. RPT: Track repeat
D. RND: Disc random
T. INT: Track intro</p> <p>4 Playback information</p> <p style="padding-left: 20px;">T02-C03 Current title/chapter
TRACK 01 Current track
F001-T001 Current folder/track
F001-F002 Current folder/file</p> <p>5 Time indication</p> <p style="padding-left: 20px;">TOTAL Elapsed playing time of the disc
T. REM Remaining title time (for DVD)
Remaining disc time (for others)
TIME Elapsed playing time of the current chapter/track
REM Remaining time of the current chapter/track</p> | <p>6 Playback status</p> <p style="padding-left: 20px;">▶ Play
◀◀/▶▶ Reverse/forward search
◀◀/▶▶ Reverse/forward slow-motion
⏸ Pause
■ Stop</p> <p>7 Operation icons</p> <p style="padding-left: 20px;">TIME Change time indication (see 5)
⏮➡ Time Search (Specify a certain scene by entering time.)
TITLE➡ Title Search (by its number)
CHAP➡ Chapter Search (by its number)
TRACK➡ Track Search (by its number)
RPT Repeat play*
INT Intro play*
RND Random play*
🔊 Change the audio language or audio channel
📄 Change the subtitle language
📺 Change the view angle</p> |
|---|--|

* 📖 page 18

Listening to other external components

AV-INPUT

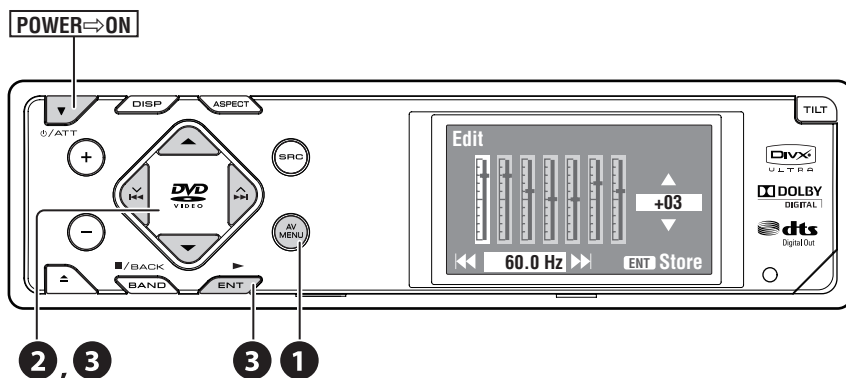
You can connect an external component to the LINE IN/VIDEO IN plugs.



- 1 Select "AV-IN".
- 2 Turn on the connected component and start playing the source.

If you select <Camera Mirror> for <AV Input> (page 32), some status messages such as volume level change will not appear on the monitor while viewing the picture.

Sound equalization



Selecting sound mode

1



2

Equalizer menu icon



3

Select a sound mode.

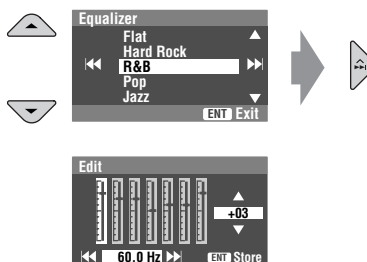


- For preset values of each sound mode, see page 39.

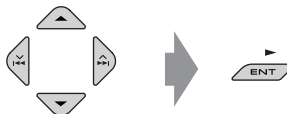
Storing your own adjustment

You can store your adjustment into User1, User2, and User3.

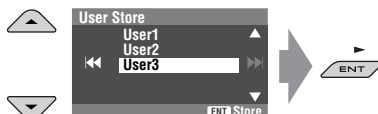
1 Repeat steps 1 and 2, then...



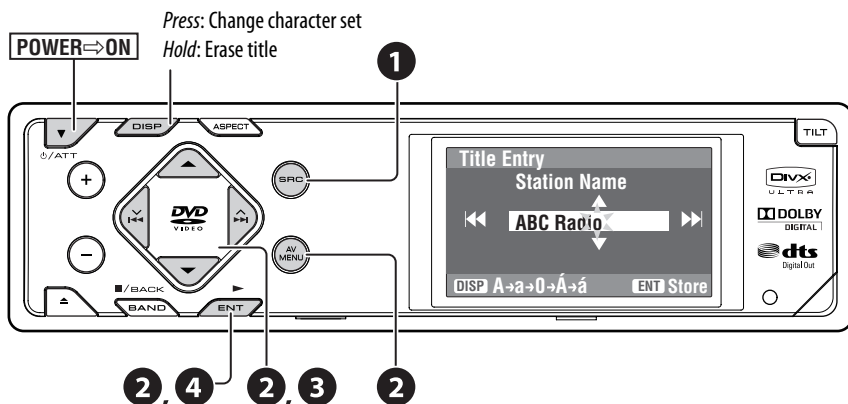
2 Adjust.



3 Store.



Assigning titles to the sources



You can assign titles as follows.

FM/AM stations	Up to 16 characters—up to 30 stations.
AV-IN	Up to 16 characters

- If you try to assign a title to a 31st station, "Name Full" flashes on the monitor. Delete unwanted titles before assignment.

1 Select the source.

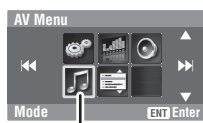
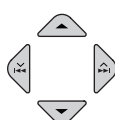
- For FM/AM stations: Select the band, then tune into a station.
- For "AV-IN": Select the source.

2 Display the title entry screen.

1



2

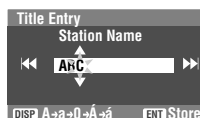


Mode menu icon

3

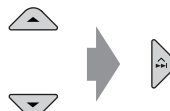


Ex. When you select FM as the source



3 Assign a title.

- 1 Select a character, then move the entering position.



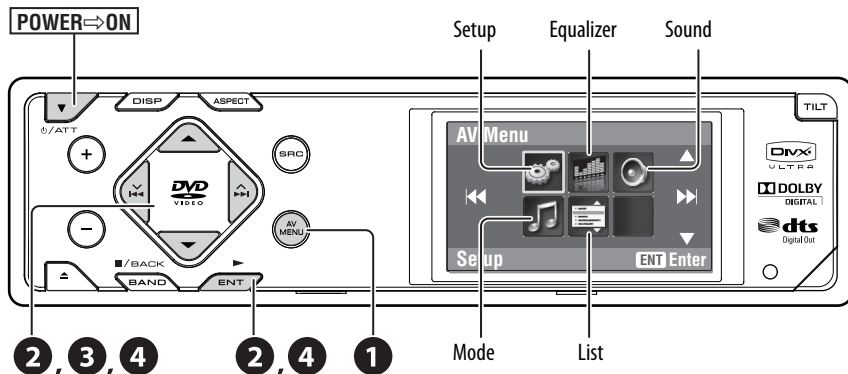
- To change the character set, press **DISP**. (For available characters, see page 38.)

- 2 Repeat step 1 until you finish entering the title.

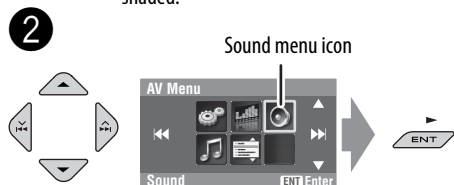
4 Finish the procedure.



Menu operations



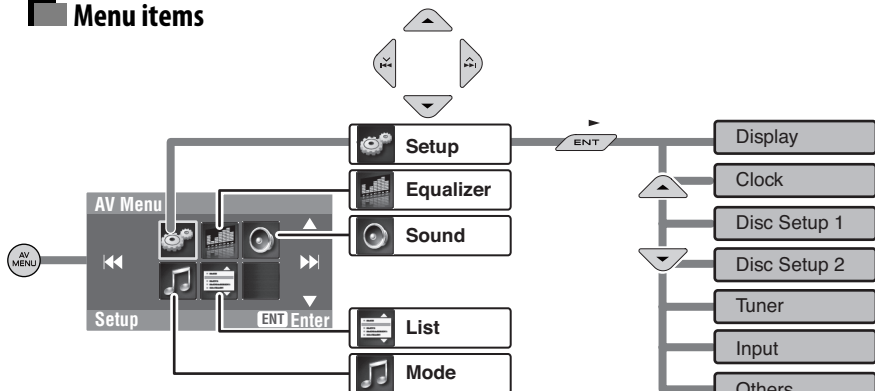
Ex. Changing the <High Pass Filter> setting



- For some items, repeat this steps to set the sub-items.



Menu items



- The display indications may change according to change of the specifications.










Setup

Initial: **Underlined**

Menu items		Selectable settings, [reference page]
Display	Demonstration	Off : Cancels. On : Activates the demonstration on the monitor.
	Wall Paper	You can select the background picture of the monitor.
	Scroll	Off : Cancels. Once : Scrolls the disc information once. Auto : Repeats scrolling (5-second intervals). • Holding DISP scrolls the information regardless of this setting.
	Tag Display	Off : Cancels. On : Shows the Tag data while playing MP3/WMA/WAV tracks.
	Dimmer	Off : Cancels. On : Activates dimmer. Auto : Dims the monitor when you turn on the headlights.* ¹ Time Set : Press ENT (or ►►►) to display the time setting screen, then set the Dimmer On/Off times.
	Bright	You can adjust brightness of the monitor. –15 (darkest) to +15 (brightest); Initial 00
	Picture Adjust* ²	You can adjust the following to make the monitor clear and legible for watching the playback picture. The setting will be stored separately for “DISC” and “AV-IN”. –15 to +15; Initial 0 Bright : Adjust if the picture is too bright or too dark. Contrast : Adjust the contrast. Color : Adjust the color of the picture—lighter or darker. Tint : Adjust the tint if the human skin color is unnatural (not adjustable for PAL signals).

*¹ The ILLUMINATION CONTROL lead connection is required. (☞ Installation/Connection Manual)

*² Adjustable only when the source is a disc containing pictures or movies, or “AV-IN”.

Menu items		Selectable settings, [reference page]	
Display	Aspect* ³	You can change the aspect ratio of the picture.	
		Aspect ratio of incoming signal	
		4:3	16:9
		Full : For 16:9 original pictures	 
		Auto : <ul style="list-style-type: none">For “DISC”: Aspect ratio is automatically selected to match to the incoming signals.For the other video sources: Aspect ratio is fixed to <Regular>.	
	Regular : For 4:3 original pictures	 	
NTSC/PAL		This setting is valid only to the external monitor connected. Select the color system of the external monitor— NTSC , PAL . <ul style="list-style-type: none">Turn off the power and turn it on again to make the new setting effective.	
Language* ⁴		Select the indication language shown on the monitor. English, Spanish, French, German, Italian, Dutch, Swedish, Danish, Russian	
Clock	Time Set	Initial 1:00 AM ,  [8]	
	12Hours/24Hours	12 Hours, 24 Hours ,  [8]	
	OSD Clock	Off, On ,  [8]	

^{*3} Not adjustable for audio sources.

^{*4} After you change the indication language setting, turn off then on the power so that your setting takes effect.

Continued on the next page

Menu items		Selectable settings, [reference page]
Disc Setup 1 *5	Menu Language	Select the initial disc menu language; Initial English (☞ also page 39).
	Audio Language	Select the initial audio language; Initial English (☞ also page 39).
	Subtitle	Select the initial subtitle language or erase the subtitle (<Off>); Initial English (☞ also page 39).
	OSD Language	Select the on-screen language used for the external monitor connected to the VIDEO OUT plug; Initial English .
	Monitor Type	Select the monitor type to watch a wide screen picture on the external monitor. 16:9 : Select when the aspect ratio of the external monitor is 16:9. 4:3 Letterbox/4:3 Pan Scan : Select when the aspect ratio of the external monitor is 4:3. Refer to the illustrations on the left to see how the pictures are shown on the monitor.
	OSD Position	Select the position of the on-screen bar, ☞ [23]. 1 : Higher position 2 : Lower position
File Type		Select playback file type when a disc contains different types of files. Audio : Plays back audio files. Still Picture : Plays back JPEG files. Video : Plays back DivX/MPEG1/MPEG2 files.
DivX Regist. (Registration)		This unit has its own Registration Code. Once you have played back a disc in which the Registration Code recorded, this unit's Registration Code is overwritten for copyright protection.

*5 Selectable only for "DISC" (disc playback pauses).

	Menu items	Selectable settings, [reference page]
Disc Setup 2 ^{*5}	D. Audio Output	<p>Select the signal format emitted through the DIGITAL OUT (optical) terminals. (☞ also page 38)</p> <p>PCM Only : Select this when connecting an amplifier or a decoder incompatible with Dolby Digital, DTS, or MPEG Audio, or connecting to a recording device.</p> <p>Dolby Digital : Select this when connecting an amplifier or a decoder compatible with Dolby Digital.</p> <p>Stream : Select this when connecting an amplifier or a decoder compatible with Dolby Digital, DTS, or MPEG Audio.</p>
	Down Mix	<p>When playing back a multi-channel disc, this setting affects the signals reproduced through the LINE OUT plugs.</p> <p>Dolby Surround : Select this to enjoy multi-channel surround audio by connecting an amplifier compatible with Dolby Surround.</p> <p>Stereo : Normally select this.</p>
	D. (Dynamic) Range Compres. (Compression)	<p>You can enjoy a powerful sound at a low volume level while playing Dolby Digital software.</p> <p>Auto : Select to apply the effect to multi-channel encoded software.</p> <p>On : Select this to always use this function.</p>
Tuner	IF Band Width	<p>Auto : Increases the tuner selectivity to reduce interference noises between adjacent stations. (Stereo effect may be lost.)</p> <p>Wide : Subject to the interference from adjacent stations, but sound quality will not be degraded and the stereo effect will remain.</p>

^{*5} Selectable only for "DISC" (disc playback pauses).

Continued on the next page


	Menu items	Selectable settings, [reference page]
Input	AV Input	<p>You can determine the use of LINE IN and VIDEO IN plugs.</p> <p>Off : Select when no component is connected ("AV-IN" is skipped while selecting the source).</p> <p>Audio&video : Select when connecting an AV component such as a VCR.</p> <p>Audio : Select when connecting an audio component such as a digital audio player.</p> <p>Camera^{*6} : Select when connecting the rear view camera.</p> <p>Camera Mirror^{*6} : The mirror image of the rear view is displayed on the monitor. (The monitor on the unit only; the normal rear view appears on the external monitor.)</p>
	External Input	Keep "Changer" to use.
Others	Beep	<p>Off : Cancels.</p> <p>On : Activates the key-touch tone.</p>
	Telephone Muting ^{*7}	<p>Off : Cancels.</p> <p>Muting1, Muting2 : Select either one which mutes the sounds while using the cellular phone.</p>
	Initialize	Initialize all settings you have made in <AV Menu>. Press ENT , then reset the unit (ⓘ page 3).

^{*6} Reverse lamp lead connection is required. See Installation/Connection Manual (separate volume). The rear view through the camera appears on the monitor in "Full" aspect ratio (regardless of the aspect ratio setting) when you shift the gear to the reverse (R) position.

^{*7} The TEL MUTING lead connection is required. See Installation/Connection Manual (separate volume).

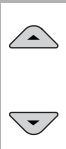



Equalizer

Menu items	Selectable settings, [reference page]
Flat/Hard Rock/R&B/Pop/Jazz/ Dance/Country/Reggae/Classic/ User1/User2/User3	 [25]



Sound

Menu items	Selectable settings, [reference page]
Fader/Balance Adjusts fader  Adjust balance 	Adjust fader—speaker output balance between the front and rear speakers. <ul style="list-style-type: none"> • Upmost—front only • Downmost—rear only When using a two-speaker system, set the fader to the center (00). Adjust balance—speaker output balance between the left and right speakers. <ul style="list-style-type: none"> • Leftmost—left only • Rightmost—right only
Volume Adjust	Adjust and store auto-adjustment volume level for each source, comparing to the FM volume level. The volume level will automatically increase or decrease when you change the source. –12 to +12; Initial 00
Subwoofer	Adjust the settings below in the submenu: Phase : Subwoofer phase. Select either < Normal > or < Reverse >, which reproduces a better sound. Level : Subwoofer output level. Level: –06 to +08; Initial 00
High Pass Filter	Through : Select when the subwoofer is not connected. On : Select when the subwoofer is connected.
Crossover	Adjust the crossover frequency between the front/rear speakers and the subwoofer. 80Hz, 120Hz, 150Hz
Amplifier Gain	You can change the maximum volume level of this unit. Off : Deactivates the built-in amplifier. Low Power : VOL 00 to 30 (Select this if the maximum power of the speakers is less than 50 W) High Power : VOL 00 to 50



Mode^{*8}

Menu items	Selectable settings, [reference page]
Mono	Only for FM. (Off , On), [12]
DX/Local	Only for FM. (DX , Local), [13]
SSM	Only for FM. [13]
Title Entry	Only for FM/AM stations, “AV-IN”. [26]
All Off/Intro/Repeat/Random	Only for disc playback. [18]



List

The accessible lists differ depending on the sources, [14, 19]

^{*8} Items listed under <Mode> vary among the playback sources.

More about this unit

■ General

Turning on the power

- By pressing SRC (source) on the unit, you can also turn on the power. If the source is ready, playback starts.

■ FM/AM

Storing stations in memory

- When SSM is over, received stations are preset in No. 1 (lowest frequency) to No. 6 (highest frequency).

■ Disc

General

- In this manual, words “track” and “file” are interchangeably used.
- This unit can also play back 8 cm discs.
- This unit can only play back audio CD (CD-DA) files if different type of audio files (MP3/WMA/WAV) are recorded in the same disc.
- This unit can display only one-byte characters. No other characters can be correctly displayed.

Inserting a disc

- When a disc is inserted upside down, “Cannot play this disc Check the disc” appears on the monitor. Eject the disc.

Ejecting a disc

- If the ejected disc is not removed within 15 seconds, the disc is automatically inserted again into the loading slot to protect it from dust. (Disc playback starts.)

Changing the source

- If you change the source, playback also stops without ejecting the disc.

Next time you select “DISC” for the playback source, disc play starts from where it stopped previously.

Playing Recordable/Rewritable discs

- This unit can recognize a total of 5 000 files and 250 folders (a maximum of 999 files per folder).
- Use only “finalized” discs.
- This unit can play back multi-session discs; however, unclosed sessions will be skipped while playing.
- This unit can recognize a total 25 characters for file/folder names.
- Some discs or files may not be played back due to their characteristics or recording conditions.

Playing DivX files

- This unit can play back DivX files with the extension code <.divx>, <.div>, <.avi> (regardless of the letter case—upper/lower).
- This unit supports the DivX files whose resolution is 720 x 576 pixels or less.
- This unit supports DivX 6.x, 5.x, 4.x, and 3.11.
- Audio stream should conform to MP3 or Dolby Digital.
- This unit does not support GMC (Global Motion Compression).
- The file encoded in the interlaced scanning mode may not be played back correctly.
- The maximum bit rate for video is 4 Mbps (average).

Playing MPEG files

- This unit can play back MPEG files with the extension code <.mpg> or <.mpeg>.
- The stream format should conform to MPEG system/program stream.
- The file format should be MP@ML (Main Profile at Main Level)/SP@ML (Simple Profile at Main Level)/MP@LL (Main Profile at Low Level).
- Audio streams should conform to MPEG1 Audio Layer-2.
- The maximum bit rate for video is 4 Mbps (average).

Playing JPEG files

- This unit can play back JPEG files with the extension code <.jpg> or <.jpeg>.
- It is recommended that you record a file at 640 x 480 resolution.
- This unit can play back baseline JPEG files. Progressive JPEG files or lossless JPEG files cannot be played.

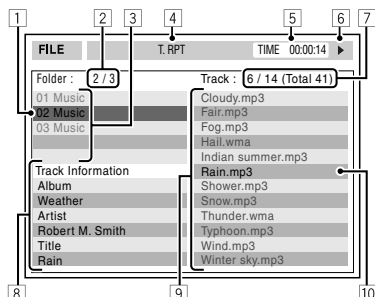
Playing MP3/WMA/WAV files

- This unit can play back files with the extension code <.mp3>, <.wma>, or <.wav> (regardless of the letter case—upper/lower).
- This unit can play back the files meeting the conditions below:
 - Bit rate: MP3/WMA: 32 kbps — 320 kbps
 - Sampling frequency:
 - 48 kHz, 44.1 kHz, 32 kHz (for MPEG1)
 - 24 kHz, 22.05 kHz, 16 kHz (for MPEG2)
 - 48 kHz, 44.1 kHz, 32 kHz, 22.05 kHz (for WMA)
 - 44.1 kHz (for WAV)
- This unit can show ID3 Tag Version 1.0/1.1/2.2/2.3/2.4 (for MP3). This unit can also show WAV Tag and WMA Tag.
- This unit can play back files recorded in VBR (variable bit rate). Files recorded in VBR have a discrepancy in elapsed time indication.
- This unit cannot play back the following files:
 - MP3 files encoded with MP3i and MP3 PRO format.
 - MP3 files encoded with Layer 1/2.
 - WMA files encoded with lossless, professional, and voice format.
 - WMA files which are not based upon Windows Media® Audio.
 - WMA files copy-protected with DRM.
 - Files which have the data such as AIFF, ATRAC3, etc.

Control screen

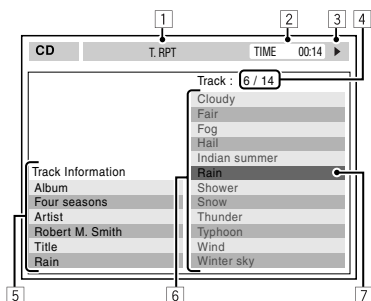
- The following control screens appear only on the external monitor.

DivX/MPEG1/MPEG2/JPEG/MP3/WMA/WAV



- 1 Current folder (highlighted bar)
- 2 Current folder number/total folder number
- 3 Folder list
- 4 Selected playback mode
- 5 Elapsed playing time of the current track (not displayed for JPEG)
- 6 Operation status
- 7 Current track number/total number of tracks in the current folder (total number of tracks on the disc)
- 8 Track information (only for MP3/WMA/WAV)
- 9 Track list
- 10 Current track (highlighted)

CD



- 1 Selected playback mode
- 2 Elapsed playing time of the current track
- 3 Operation status
- 4 Current track number/total number of tracks on the disc
- 5 Track information
- 6 Track list
- 7 Current track (highlighted bar)

Menu settings

- If you change the **<Amplifier Gain>** setting from **<High Power>** to **<Low Power>** while the volume level is set higher than "30", the unit automatically changes the volume level to "VOL 30".
- After you change any of **<Menu Language/Audio Language/Subtitle>** settings, turn off then on the power, and re-insert the disc (or insert another disc) so that your setting takes effect.
- When you select **<16:9>** for a picture whose aspect ratio is 4:3, the picture slightly changes due to the process for converting the picture width.
- Even if **<4:3 Pan Scan>** is selected, the screen size may become **<4:3 Letterbox>** for some discs.

Sound signals emitted through the rear terminals

Through the analog terminals (Speaker out/LINE OUT)

2-channel signal is emitted. When playing multi-channel encoded disc, multi-channel signals are downmixed.

- DTS sound cannot be reproduced.

Through the DIGITAL OUT terminal

Digital signals (Linear PCM, Dolby Digital, DTS, MPEG Audio) are emitted.

- To reproduce the multi-channel sounds such as Dolby Digital, DTS, and MPEG Audio, connect an amplifier or a decoder compatible with these multi-channel sources to this terminal, and set <**D. Audio Output**> correctly. (🔊 page 31)

D. Audio Output Playback disc		Output signals		
		Stream	Dolby Digital	PCM Only
DVD	48 kHz, 16/20/24 bits Linear PCM	48 kHz, 16 bits stereo Linear PCM*		
	96 kHz, Linear PCM	48 kHz, 16 bits stereo Linear PCM		
	with Dolby Digital	Dolby Digital bitstream		48 kHz, 16 bits stereo Linear PCM
	with DTS	DTS bitstream		
	with MPEG Audio	MPEG bitstream	48 kHz, 16 bits stereo Linear PCM	
Audio CD, Video CD		44.1 kHz, 16 bits stereo Linear PCM / 48 kHz, 16 bits stereo Linear PCM		
Audio CD with DTS		DTS bitstream		
DivX	with Dolby Digital	Dolby Digital bitstream		48 kHz, 16 bits stereo Linear PCM
	with MPEG Audio	32/44.1/48 kHz, 16 bits Linear PCM		
MPEG1/MPEG2		44.1/48 kHz, 16 bits Linear PCM		
MP3/WMA		32/44.1/48 kHz, 16 bits Linear PCM		
WAV		44.1 kHz, 16 bits stereo Linear PCM		

* Digital signals may be emitted at 20 or 24 bits (at their original bit rate) through the DIGITAL OUT terminal if the discs are not copy-protected.

Characters shown on the monitor

In addition to the roman alphabet (A – Z, a – z), the following characters will be used to show the various information on the monitor.

- You can also use the following characters to assign titles. (🔊 page 26).

Á	À	Â	Ã	Ä
Å	Æ	œ	Ç	Ć
Ç	É	Ê	Ë	Ě
Ĝ	Í	Ì	Î	Ī
Ñ	Ó	Ô	Õ	Ö
Ō	Ø	Ř	Ŕ	Š
Ś	Ş	Ú	Û	Ů
Ü	Ý	Ž	Ž	ß
Ɔ	Ɔ	Ɔ	Ɔ	Ɔ
İ	U	ö	space	

á	à	â	ã	ä
å	æ	œ	ç	ć
ç	é	ê	ë	ě
ĝ	í	ì	î	ĭ
ñ	ñ	ñ	ñ	ñ
ò	ó	ô	õ	ö
ő	ř	ŕ	š	ś
ş	ú	û	ü	ů
ú	w	y	ý	ž
ž	ÿ	þ	ŋ	đ
ı	ı	ı	ij	space

0	1	2	3	4
5	6	7	8	9
!	"	#	\$	%
&	'	()	*
+	,	-	.	/
:	;	<	=	>
?	@	_	`	i
ı	£	€	α	space

Numbers and symbols

Upper and lower cases

Language codes (for DVD/DivX language selection)

Code	Language	Code	Language	Code	Language	Code	Language	Code	Language
AA	Afar	FA	Persian	KL	Greenlandic	OC	Occitan	ST	Sesotho
AB	Abkhazian	FI	Finnish	KM	Cambodian	OM	(Afan) Oromo	SU	Sundanese
AF	Afrikaans	FJ	Fiji	KN	Kannada	OR	Oriya	SW	Swahili
AM	Ameharic	FO	Faroese	KO	Korean (KOR)	PA	Panjabi	TA	Tamil
AR	Arabic	FY	Frisian	KS	Kashmiri	PL	Polish	TE	Telugu
AS	Assamese	GA	Irish	KU	Kurdish	PS	Pashto, Pushto	TG	Tajik
AY	Aymara	GD	Scots Gaelic	KY	Kirghiz	PT	Portuguese	TH	Thai
AZ	Azerbaijani	GL	Galician	LA	Latin	QU	Quechua	TI	Tigrinya
BA	Bashkir	GN	Guarani	LN	Lingala	RM	Rhaeto-Romance	TK	Turkmen
BE	Byelorussian	GU	Gujarati	LO	Laothian	RN	Kirundi	TL	Tagalog
BG	Bulgarian	HA	Hausa	LT	Lithuanian	RO	Rumanian	TN	Setswana
BH	Bihari	HI	Hindi	LV	Latvian, Lettish	RW	Kinyarwanda	TO	Tonga
BI	Bislama	HR	Croatian	MG	Malagasy	SA	Sanskrit	TR	Turkish
BN	Bengali, Bangla	HU	Hungarian	MI	Maori	SD	Sindhi	TS	Tsonga
BO	Tibetan	HY	Armenian	MK	Macedonian	SG	Sangho	TT	Tatar
BR	Breton	IA	Interlingua	ML	Malayalam	SH	Serbo-Croatian	TW	Twi
CA	Catalan	IE	Interlingue	MN	Mongolian	SI	Singhalese	UK	Ukrainian
CO	Corsican	IK	Inupiak	MO	Moldavian	SK	Slovak	UR	Urdu
CS	Czech	IN	Indonesian	MR	Marathi	SL	Slovenian	UZ	Uzbek
CY	Welsh	IS	Icelandic	MS	Malay (MAY)	SM	Samoa	VI	Vietnamese
DZ	Bhutani	IW	Hebrew	MT	Maltese	SN	Shona	VO	Volapuk
EL	Greek	JI	Yiddish	MY	Burmese	SO	Somali	WO	Wolof
EO	Esperanto	JW	Javanese	NA	Nauru	SQ	Albanian	XH	Xhosa
ET	Estonian	KA	Georgian	NE	Nepali	SR	Serbian	YO	Yoruba
EU	Basque	KK	Kazakh	NO	Norwegian	SS	Siswati	ZU	Zulu

Preset equalizing values

Frequency	60 Hz	150 Hz	400 Hz	1 kHz	2.5 kHz	6.3 kHz	15 kHz
Sound mode							
Flat	00	00	00	00	00	00	00
Hard Rock	+03	+03	+01	00	00	+02	+01
R&B	+03	+02	+02	00	+01	+01	+03
Pop	00	+02	00	00	+01	+01	+02
Jazz	+03	+02	+01	+01	+01	+03	+02
Dance	+04	+02	00	-02	-01	+01	+01
Country	+02	+01	00	00	00	+01	+02
Reggae	+03	00	00	+01	+02	+02	+03
Classic	+02	+03	+01	00	00	+02	00
User1/2/3	00	00	00	00	00	00	00

Troubleshooting

What appears to be trouble is not always serious. Check the following points before calling a service center.

	Symptoms	Remedies/Causes
General	<ul style="list-style-type: none"> No sound comes out of the speakers. 	<ul style="list-style-type: none"> Adjust the volume to the optimum level. Check the cords and connections. DTS sound cannot be reproduced through the analog terminals (Speaker out/LINE OUT).
	<ul style="list-style-type: none"> The monitor is not clear and legible. 	Sunshine from the windshield may cause this symptom. Adjust <Bright> . (☞ page 28)
	<ul style="list-style-type: none"> The unit does not work at all. 	Reset the unit. (☞ page 3)
	<ul style="list-style-type: none"> "No Signal" appears. 	<ul style="list-style-type: none"> Change the source. Start the playback on the external component connected to VIDEO IN plug. Check the cords and connections. Signal input is too weak.
FM/AM	<ul style="list-style-type: none"> SSM automatic presetting does not work. 	Store stations manually. (☞ page 14)
	<ul style="list-style-type: none"> Static noise while listening to the radio. 	Connect the antenna firmly.
Disc playback	<ul style="list-style-type: none"> Disc can be neither recognized nor played. 	Eject the disc forcibly. (☞ page 3)
	<ul style="list-style-type: none"> Disc cannot be ejected. 	Unlock the disc. (☞ page 19)
	<ul style="list-style-type: none"> Recordable/Rewritable discs cannot be played back. Tracks on the Recordable/Rewritable discs cannot be skipped. 	<ul style="list-style-type: none"> Insert a finalized disc. Finalize the discs with the component which you used for recording.
	<ul style="list-style-type: none"> Playback does not start. 	<ul style="list-style-type: none"> Insert the disc correctly again. Region code of the DVD is not correct. (☞ page 6) The format of files is not supported by the unit.
	<ul style="list-style-type: none"> The playback picture is not clear and legible. 	Adjust items in <Picture Adjust> . (☞ page 28)
	<ul style="list-style-type: none"> Sound and pictures are sometimes interrupted or distorted. 	<ul style="list-style-type: none"> Stop playback while driving on rough roads. Change the disc.
	<ul style="list-style-type: none"> No playback picture appears on the monitor. 	Parking brake lead is not connected properly. (☞ Installation/Connection Manual)
	<ul style="list-style-type: none"> No picture appears on the external monitor. 	<ul style="list-style-type: none"> Connect the video cord correctly. Select the correct input on the external monitor.

	Symptoms	Remedies/Causes
MP3/WMA/WAV playback	• Disc cannot be played back.	<ul style="list-style-type: none"> • Change the disc. • Record the tracks using a compliant application in the appropriate discs. (🔍 page 4) • Add appropriate extension codes to the file names.
	• Noise is generated.	The track played back is not a playable file format. Skip to another file.
	• Tracks are not played back as you have intended them to play.	Playback order may differs from the one played back using other players.
	• Elapsed playing time is not correct.	This sometimes occurs during playback. This is caused by how the tracks are recorded.
AV-IN	• No picture appears on the monitor.	<ul style="list-style-type: none"> • Turn on the video component if it is not on. • This unit is not connected to the video component correctly. Connect it correctly.
	• The playback picture is not clear and legible.	Adjust items in <Picture Adjust>. (🔍 page 28)

Specifications

AMPLIFIER	Maximum Power Output:	Front/Rear:	50 W per channel
	Continuous Power Output:	Front/Rear:	20 W per channel into 4 Ω , 40 Hz to 20 000 Hz at no more than 0.8% total harmonic distortion.
	Load Impedance:		4 Ω (4 Ω to 8 Ω allowance)
	Equalizer Control Range:	Frequencies:	60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.5 kHz, 6.3 kHz, 15 kHz
		Level:	± 10 dB
	Signal-to-Noise Ratio:		70 dB
	Audio Output Level LINE OUT (FRONT/ REAR)/SUBWOOFER:	Line-Out Level/Impedance:	2.5 V/20 k Ω load (full scale)
		Output Impedance:	1 k Ω
	Color System:		NTSC/PAL
	Video Output (composite):		1 V _{p-p} /75 Ω
	Other Terminals:	Input:	LINE IN, VIDEO IN, Antenna input
		Output:	VIDEO OUT, DIGITAL OUT (optical)
FM/AM TUNER	Frequency Range:	FM:	87.5 MHz to 108.0 MHz
		AM:	531 kHz to 1 602 kHz
	FM Tuner	Usable Sensitivity:	11.3 dBf (1.0 μ V/75 Ω)
		50 dB Quieting Sensitivity:	16.3 dBf (1.8 μ V/75 Ω)
		Alternate Channel Selectivity (400 kHz):	65 dB
		Frequency Response:	40 Hz to 15 000 Hz
		Stereo Separation:	35 dB
	AM Tuner	Sensitivity/Selectivity:	20 μ V/35 dB

DVD/CD	Signal Detection System:	Non-contact optical pickup (semiconductor laser)	
	Frequency Response:	DVD, fs=48 kHz:	16 Hz to 22 000 Hz
		DVD, fs=96 kHz:	16 Hz to 22 000 Hz
		VCD/CD:	16 Hz to 20 000 Hz
	Dynamic Range:		93 dB
	Signal-to-Noise Ratio:		95 dB
	Wow and Flutter:		Less than measurable limit

MONITOR	Screen Size:	2.7 inch wide liquid crystal display	
	Number of Pixel:	123 200 pixels: 560 (horizontal) × 220 (vertical)	
	Drive Method:	TFT (Thin Film Transistor) active matrix format	
	Color System:	NTSC/PAL	
	Aspect Ratio:	16:9 (wide)	
	Allowable Storage Temperature:		−10°C to +60°C
	Allowable Operating Temperature:		0°C to +40°C

GENERAL	Power Requirement:	Operating Voltage:	DC 14.4 V (11 V to 16 V allowance)
	Grounding System:		Negative ground
	Allowable Operating Temperature:		0°C to +40°C
	Dimensions (W × H × D):	Installation Size (approx.):	182 mm × 52 mm × 160 mm
		Panel Size (approx.):	188 mm × 58 mm × 14 mm
	Mass (approx.):		2.1 kg (excluding accessories)

Design and specifications are subject to change without notice.

KENWOOD